

CLAIMS

1. A planar antenna fitted with a reflector comprising:  
a radiator; and  
a reflector of planar form whereof both side sections,  
arranged facing said radiator with a prescribed separation,  
are bent towards said radiator,  
characterized in that said prescribed separation of said  
radiator and said reflector is reduced to about  $0.06 \lambda$ ,  
where  $\lambda$  is the wavelength of the central frequency of the  
operating frequency band.
2. The planar antenna fitted with a reflector according  
to claim 1, characterized in that the separation of the  
edges of said radiator and the leading edges of said bent  
side sections in said reflector is no more than said  
prescribed separation.
3. The planar antenna fitted with a reflector according  
to claim 1, characterized in that said radiator is a dipole,  
stacked dipole, biconical, loop, triangular double loop or  
rectangular double loop radiator.
4. The planar antenna fitted with a reflector according  
to claim 1, characterized in that an obtuse angle is formed  
between said two side sections in said reflector facing said

radiator and said two side sections thereof are bent towards said radiator.

5. A planar antenna fitted with a reflector comprising:  
a radiator; and  
a reflector of planar form that is arranged with a prescribed separation facing said radiator and that is bent substantially at the center with an obtuse angle towards said radiator and wherein the two side edges are arranged adjacent to said radiator.

6. A planar antenna fitted with a reflector, characterized in that a reflector of planar form whereof both side sections are bent towards said radiator is arranged with a prescribed separation with respect to a radiator of planar form which has at least upper and lower sides and comprises a double loop element wherein the width of said upper and lower sides is formed wider than that of the other sides thereof, facing the surface of said radiator, whereby

said prescribed separation of said radiator and said reflector can be arranged such as to be substantially adjacent up to about 0.06  $\lambda$ , where  $\lambda$  is the wavelength of the central frequency of the operating frequency band.

7. The planar antenna fitted with a reflector according to claim 6, characterized in that the separation of the side edges of said radiator and the leading edges of said bent side sections in said reflector is no more than said prescribed separation.

8. The planar antenna fitted with a reflector according to claim 6, characterized in that said radiator comprises a triangular double loop element or rectangular double loop element, the width of the upper and lower sides of said radiator being about  $0.06 \lambda$  to  $0.1 \lambda$ .

9. The planar antenna fitted with a reflector according to claim 6, characterized in that an obtuse angle is formed between said two side sections in said reflector facing said radiator and said two side sections thereof are bent towards said radiator.

10. A planar antenna fitted with a reflector comprising:

a planar radiator having at least upper and lower sides and comprising a double loop element and wherein the width of said upper and lower sides is formed wider than that of the other sides; and

a planar reflector arranged with a prescribed separation facing the radiator;

characterized in that:

said reflector is bent, substantially at the center thereof, with an obtuse angle towards said radiator, such that the two end edges are arranged adjacent to said radiator.